

Remarks/Arguments:

Claims 1-5 and 7-14 stand rejected.

By this Amendment, claims 1, 3-5, 7-8, 10-11 and 13-14 are amended.

No new matter is added by the claim amendments. Support for the claim amendments can be found throughout the original specification and, for example, in the original specification at paragraphs [21] to [26].

Claim Objections to Claims 3, 7 and 11

In the Office Action, at item 2, claims 3, 7 and 11 are objected to for informalities therein.

Applicants have amended claims 3, 7 and 11, as suggested by the Examiner, to overcome this objection.

Reconsideration is respectfully requested.

Rejection of Claims 13 and 14

In the Office Action, at item 4, claims 13 and 14 are rejected under 35 U.S.C. §102(e) as anticipated by Henderson (US 7,280,140).

Reconsideration is respectfully requested.

Claim 13

Claim 13 is directed to a method of sampling a group of active pixels, and recites:

... wherein the serial sampling of the video voltage by the video amplifier includes switching a terminal of a single capacitor between a respective column input and an output of the video amplifier,

(hereafter referred to as the switching feature.) That is, a terminal of a single capacitor is switched between a respective column input and an output of the video amplifier.

Henderson Reference

Henderson discloses that an image sensor has an array of active pixels. Each column shares a reset voltage line VRT and a read line Vx. FIGs. 1 and 6 of Henderson show a Vsig capacitor 12 and a Vblk CDS capacitors 14. The voltage VRT-Vgsn is stored on the Vblk CDS capacitor 14 and the voltage VRT-Vgsn-Vrst-Vnrst is stored on the Vsig capacitor 12. (See Henderson at column 2, line 55-65.) The Vsig capacitor 12 and Vblk CDS capacitor 14 of Henderson each have a terminal connected to a column input. Henderson, however, is silent regarding any switching of such a terminal to the output of an amplifier.

Accordingly, claim 13 is submitted to patentably distinguish over Henderson for at least the reasons set forth above.

Dependent claim 14 depends from amended claim 13. This dependent claim, therefore, is not subject to rejection in view of the cited references for at least the same reasons set forth above for amended claim 13.

Rejection of Claims 1-5 and 7-12

In the Office Action, at item 6, claims 1-5 and 7-12 are rejected under 35 U.S.C. §103(a) as unpatentable over Borg (US 6,476,864) in view of Henderson.

Reconsideration is respectfully requested.

Claim 1, which includes similar but not identical features to those of claim 13, is submitted to patentably distinguish over Henderson for at least similar reasons as those regarding claim 13.

Borg Reference

Borg discloses amplifiers 80 and 110. Amplifier 80 or amplifier 110 of Borg corresponds to the video amplifier recited in claim 1. Borg discloses that, during the first phase switches 76, 92 and 84 are closed. (See Borg at column 8, line 59 to column 9, line 6.) With switches 76, 92 and 84 closed, it is clear from FIG. 4 of Borg that capacitor 82 is connected between constant voltage reference V_{ref} and the input of the amplifier 80 and capacitor 78 is connected between the column input and the input of the amplifier 80. Moreover, during the second phase, switches 92 and 84 are opened and switch 94 is closed. It is also clear from FIG. 4 of Borg that during the second phase capacitor 82 is connected between the input and output of amplifier 80. Contrary to the recitation in claim 1, however Borg teaches the use of two capacitors (capacitors 78 and 82) for each amplifier and is also silent regarding the switching feature of claim 1. Moreover, with respect to amplifier 110 of Borg the operation of the switches is similar and capacitors 108 and 112 are connected in the same manner as capacitors 78 and 82, respectively.

Accordingly, claim 1 is submitted to patentably distinguish over Borg in view of Henderson for at least the reasons set forth above.

Although not the same, independent claims 5 and 10 include features similar to claim 1. Claims 5 and 10 therefore, are not subject to rejection in view of the cited references for the same reasons set forth above for amended claim 1.

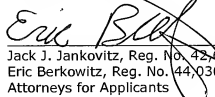
Dependent claims 2-4 depend from amended claim 1. Dependent claims 7-9 depend from amended claim 5. Dependent claims 11-12 depend from amended claim 10. These

dependent claims, therefore, are not subject to rejection in view of the cited references for at least the same reasons set forth above for amended claim 1.

Conclusion

In view of the remarks and claim amendments, Applicants submit the application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,



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